

Development of Nanostructured Metallic Systems – Progress and Challenges

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Investigations on nanostructured metallic systems have shown that exceptional property enhancements are potentially achievable through structural refinement to the nano-scale. While dramatic property improvements have been reported on these materials in the past, significant technical challenges exist in processing, as well as in retention of microstructural stability and useful properties at elevated temperatures. This presentation will summarize the key challenges in developing nanostructured metallic systems, and highlight our progress and selected successes in the understanding of structure-property relationships in metallic nanocomposites as well as nanostructured multilayered systems.